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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,336	03/22/2004	Robert W. Langlois	P74803	9072
22839	7590	11/22/2006	EXAMINER PARKER, FREDERICK JOHN	
RICHES, MCKENZIE & HERBERT, LLP SUITE 1800 2 BLOOR STREET EAST TORONTO, ON M4W 3J5 CANADA			ART UNIT 1762	PAPER NUMBER

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,336

Applicant(s)

LANGLOIS, ROBERT W.

Examiner

Frederick J. Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Specification

The amendments in response to the objections to the abstract, title, and specification of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

Claim Rejections - 35 USC § 112

The amendments in response to the 35 USC 112 rejections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the rejections. New rejections are necessitated by amendment.

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1,12,15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (1) in claim 1, the amendment requires the adhesive/ primer to increase an undefined surface conductivity of the substrate, without citing support. The limitation contradicts the specification, such as on page 5, paragraph 4; page 6, paragraph 2; etc. The limitation is therefore deemed to be New Matter. (2) claims 12,15 cite curing in "less than sixty seconds" which is introduced without citing support and Applicants merely opining without evidence that one of ordinary skill would recognize that "quickly" means less than sixty seconds. This argument is capricious and without basis, and therefore deemed to be New Matter.

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3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1 is vague and indefinite because (1) it is unclear in (c) what type of surface conductivity is increased, e.g. thermal, electrical, etc. Lines 7,8 it is unclear if a bare or sealed/ primed substrate is intended.

4. The rejections of the previous Office Action are withdrawn and replaced by those which follow necessitated by amendment.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-7,10,14,23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach US 5338578 in view of Maekawa et al US 2002/0040098.

Leach teaches the application of thermosetting powder coatings to plastic substrates, including thermosetting molded plastics without limitation , thus including polyamides per claim 4 (col. 2, 29-42), comprising the steps of washing (= cleaning) the substrate to remove residue (contamination) from the molding process; passing the part through an oven for drying and degassing (to prevent defects/ popping), as well as achieving a substrate temperature so that powder may be immediately applied to the hot substrate; applying the powder coating material

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“by any conventional powder coating method such as fluidized bed or spraying” to a desired coating thickness; and curing the powder coated substrate using infrared (heat). The process is automatically carried out using an overhead conveyor system. Col. 4,61- col. 6, 11. A finish coat may be subsequently applied by similar conventional means and cured, the use of a powder coat being obvious for application to another powder for adhesion and ease of curing, per claim 23. Per claim 5, it is the Examiner’s position that continuously conveying substrates to a coating zone on an overhead conveyor would have been obvious art as alluded to on col. 6, 3-13 of Leach. Finishing (top) coats are cited on col. 6, 13-25 per claim 23. Given the similarity of materials and process, the reference would have been expected to possess the same or similar properties of claim 24. When a reference discloses the limitations of a claim except for a property, and the Examiner cannot determine if the reference inherently possesses that property (in this case, Vicat MP), the burden is shifted to Applicant/s, In re Fitzgerald 205 USPQ 594 and MPEP 2112. Curing temperatures of claims 25-26 overlap those of leach bottom column 5, etc. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the curing conditions disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see In re Wortheim 191 USPQ 90. Applying an “adhesive/ primer” coat (which the examiner interprets as a primer coat; see above) is not cited.

Maekawa et al teaches applying aqueous polymeric primer/ adhesive coatings (abstract, [0091]) to polymer substrates which are then coated with polymeric compositions to improve adhesion of the subsequently applied coating and weather/ chemical resistance of the product [0086] . Application of primer is by spraying, and afterward the primer coating is heated for

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drying/ annealing (interpreted same as “curing”) , see Examples, table 5,etc. Where the principle difference between a claimed process and that of a reference is a temperature difference, it is incumbent upon Applicant to establish criticality of the difference, Ex parte Khusid 174 USPQ 59. The aqueous formulations include electro-conductive fillers [0086] which would have necessarily increased the surface conductivity of the coated substrate. After coating the primed substrate, the multiple-coated substrate is cured [0090].

The application of plural powder coatings, per claims 2-3, in the same manner would have been an obvious modification within the purview of one skilled in the art to provide a coating build-up of desired thickness.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thermosetting coating process of Leach by incorporating the primer after washing as taught by Maekawa et al to improve adhesion of a subsequently applied coating and weather/ chemical resistance of the coated substrate.

7. Claims 8,9,11-13,15,16,18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach US 5338578 in view of Maekawa et al and further in view of Liberto.

Leach and Maekawa et al are cited for the same reasons previously discussed, which are incorporated herein. Curing the thermoset powder in a combination IR and convection oven system is not cited. However, Liberto teaches on page 154 that dual-type ovens using a combination IR and convection oven system to provide curing of powder coatings are known , and provide the benefits of using IR first to melt and adhere the powder in a “quiet zone” after which convection heating completes the curing without loss of powder, per claims 11-12. Time

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and temperature are cause effective variables known in the art because equivalent outcomes may be achieved by altering time versus temperature, per claim 22. The product with one or more coatings would necessarily be removed from the conveyor rack to provide the article with functional utility, per claim 16. As to claims 19-21, the temperature of the powder and substrate would have been determined based upon the thermal characteristics of the powder composition to be applied and the time at temperature, as would have been evident given the guidance of Leach, col. 5, 2-36, and exemplified by 121-177C which overlaps Applicants' curing temperature ranges. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the heating temperatures disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. The teaching of maintaining specific substrate temperatures would have reasonably suggested to monitor substrate temperatures to allow consistent melt and flow of applied powder coating. Minimizing humidity becomes an obvious process parameter given the teachings of Leach col. 1 which teaches against the presence of vaporous species which would enter the pores of the plastic substrate and cause defects in the product due to the well-known phenomenon of "popping".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Leach in view of Maekawa et al using a dual combination IR-convection oven system as taught by Liberto to cure the applied powder coating uniformly and without loss of applied powder.

Response to Amendment/Arguments

Applicants amendments and arguments have been considered but are not deemed persuasive as to patentability of the claims. New Matter has been introduced, and the claims are unpatentable over the new rejections cited above.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

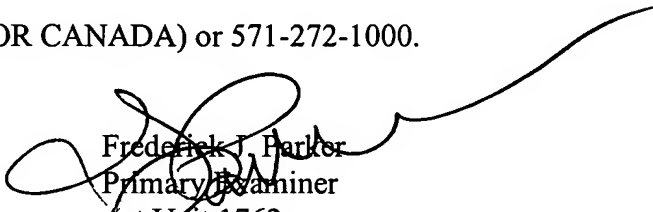
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Frederick J. Parker
Primary Examiner
Art Unit 1762

fjp